

Application Software for Industrial Vision Systems

# **Meas Tools**

Plug-In



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Version 6.2.1

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#### Introduction

#### About NeuroCheck plug-in DLLs in general

A plug-in DLL is a .NET assembly that serves to enhance NeuroCheck with user-defined image processing functionality. The NeuroCheck Plug-In Interface offers the opportunity to integrate user-defined check functions for image processing and data handling. A Plug-In can contain an arbitrary number of self-developed check functions.

These check functions have full access to the NeuroCheck runtime data objects such as Images, ROI Lists or Measurement Lists. The Plug-In check function can be added to a check as well as the built-in standard check functions of NeuroCheck.

Please note that for integration of a plug-in check function into your check routine, a Premium license is required. The completed check routine then can be run with any NeuroCheck license (except the Demo Version).



#### Installation

#### Installation

Copy the following files from the zip archive to the plug-in directory within the desired NeuroCheck project (e.g. 'C:\Users\Public\Documents\NeuroCheck\6.2\Default\Software Extensions\PlugIns').

- All files inside the Binaries directory
- All \*.chm files inside the Documentation directory

#### Loading a Plug-In

In order to use a Plug-In the Plug-In assembly must be loaded in NeuroCheck. The management of Plug-Ins takes place within the Software Settings dialog. The Software Settings dialog can be found in the System menu of NeuroCheck.

Please note that it is impossible to load or unload a Plug-In as long as a check routine is opened that contains the Plug-In check functions. If the currently opened check routine contains Plug-In check functions then close the check routine first.

Within the Software Settings dialog please select the node Plug-Ins and the sub-node Plug-In in the tree to the left. The loaded Plug-In assemblies are shown in the List of Plug-Ins. Press the Add button to open a file selection dialog in order to select a further Plug-In assembly.

#### Inserting a Plug-In check function to a check routine

A Plug-In check function is inserted using the Check Function Select dialog. All check functions of loaded Plug-Ins are listed in the Plug-In category of the Check Function Select dialog. Within the Plug-In category the check functions are ordered in sub-categories where each sub-category represents the check functions of one Plug-In.

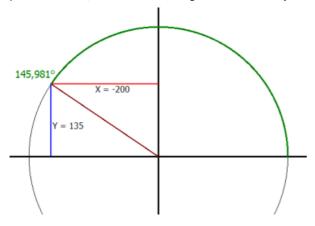
Besides the category the user will hardly notice any difference between the usage of Plug-In check functions and built-in check functions.



### **Calculate Angle from Vector: Introduction**

#### **Function overview**

This check function calculates the angle of an input vector in a range from 0 to 360 degrees from the horizontal axis in mathematical positive direction (counter clock wise). A right hand coordinate system is used (y-axis to the top, not like in NeuroCheck).



#### Input data

This check function uses two floating point number registers to compute the angle. This check function does not require any input data objects.

#### **Output data**

The calculated angle from the vector is written into a floating point number register. This check function does not create any output data objects.

#### Result view

The result view shows the calculated angle and the values from the registers which represents the vector.

Angle: 145,98065°

X = -200Y = 135

#### **Properties**

Check function group Plug-In.

123 The check function has a Parameter Dialog.

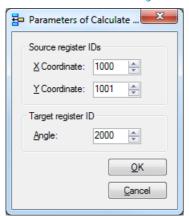
The check function has own result Visualizations.



## **Calculate Angle from Vector: Parameter Dialog**

This plug-in check function has a **Parameter** dialog.

■ Screenshot of Parameter Dialog



The **Parameter** dialog contains the following elements:

Element	Description
Source register X- coordinate	Select here the register ID for the X-coordinate.
Source register Y- coordinate	Select here the register ID for the Y-coordinate.
Target register	Select the register ID for the calculated angle.



#### **Filter Measurements: Introduction**

#### **Function overview**

This check function filters measurements in a measurement list. The screening conditions can be specified in a parameter dialog. Measurements that do not meet the condition(s) are removed from the output measurement list.

This check function requires a measurement list as input data object.

#### Output data

The check function returns a measurement list as output data object.

#### **Properties**



Check function group Plug-In.



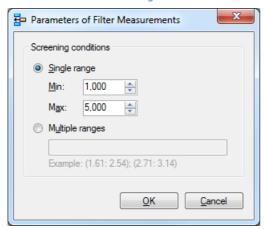
123 The check function has a Parameter Dialog.



### Filter Measurements: Parameter Dialog

This plug-in check function has a **Parameter** dialog.

■ Screenshot of Parameter Dialog



The **Parameter** dialog contains the following elements:

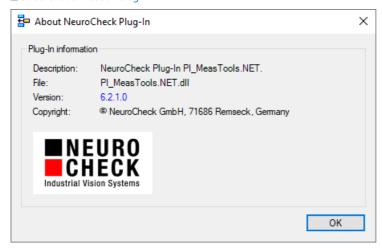
Element	Description
Single range Min	Set this as the minimum of a single screening condition.
Single range Max	Set this as the maximum of a single screening condition.
Multiple ranges	Type in conditions into the textbox if you want to filter the input measurements with multiple ranges. Example: (1.22:3.44);(300:500);(600:2000)



### **About Dialog**

This dialog displays version information about the NeuroCheck Plug-In  $Pl\_MeasTools.NET.dll$ .

■ Screenshot of About Dialog





### **Support Services**

For technical support, please contact your local NeuroCheck partner or NeuroCheck GmbH:

Phone: +49 (0) 7146 - 89 56-40 E-Mail: support@neurocheck.com Web: www.neurocheck.com

Before contacting us, please provide some important information about your system:

Information about your NeuroCheck installation and your PC setup:

- Use the NeuroCheck Diagnostics tool to check your installation and computer configuration.
- The NeuroCheck Diagnostics is installed in the "Tools" folder within your NeuroCheck installation.

Log file information:

Logging for NeuroCheck can be activated in System > Software Settings > Diagnosis > Logging.

